

described in paragraph (f)(7) of this section is prepared by the pipetting an appropriate volume of the solvent layer into a second volumetric flask and diluting to volume with solvent. If the net absorbance is less than 0.1 when determined in accordance with the procedures in this paragraph, it is recalculated using a longer pathlength cell.

(h) *Calculations.* (1) The plot described in paragraph (g)(6) of this section is used to determine the milligrams of oil in each 100 ml. of solvent layer contained in the volumetric flask after completing the steps described in paragraph (f) or paragraph (g)(7) of this section.

(2) The oil content of the sample is calculated using the following formula:  
oil content of sample =  $R \times D \times 1000 / V$

R = mg. of oil in 100 ml. of solvent layer determined from plot.

D = 1 or, if the step described in paragraph (g)(7) of this section is performed, the ratio of the volume of the second volumetric flask described in that paragraph to the volume of solvent layer pipetted into the second volumetric flask.

V = The volume of water in milliliters drained into the graduated cylinder at the step described in paragraph (f)(8) of this section.

(3) The results are reported to two significant figures for oil contents below 100 mg/l and to three significant figures for oil contents above 100 mg/l. The results are converted to p.p.m.

## PART 163—CONSTRUCTION

### Subpart 163.001 [Reserved]

### Subpart 163.002—Pilot Hoist

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### Subpart 163.003—Pilot Ladder

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AUTHORITY: 46 U.S.C. 3306, 3703, 5115; E.O. 12234, 45 FR 58801, 3 CFR, 1980 Comp., p. 277; 49 CFR 1.46.

SOURCE: CGFR 50-30, 16 FR 1086, Feb. 6, 1951, unless otherwise noted.

### Subpart 163.001 [Reserved]

### Subpart 163.002—Pilot Hoist

SOURCE: CGD 74-140, 46 FR 63287, Dec. 31, 1981, unless otherwise noted.

#### § 163.002-1 Scope.

(a) This subpart contains standards and approval and production tests for pilot hoists used on merchant vessels.

(b) The requirements in this subpart apply to a pilot hoist designed for use along a vertical portion of a vessel's hull.

#### § 163.002-3 Applicable technical regulations.

(a) This subpart makes reference to the following Coast Guard regulations in this chapter:

- (1) Subpart 58.30 (Fluid Power and Control Systems).
- (2) Section 94.33-10 (Description of Fleet Angle).
- (3) Part 111 (Electrical System, General Requirements).
- (4) Subpart 163.003 (Pilot Ladder).
- (b) [Reserved]

#### § 163.002-5 Definitions.

(a) *Maximum persons capacity* means—

(1) If the hoist has a rigid ladder, one person; or

(2) If the hoist has a platform, one person per square meter (10.75 sq. ft.) or fraction thereof of platform area (including hatch area);

(b) *Working load* means the sum of the weights of—

(1) The rigid ladder or lift platform, the suspension cables (if any) and the pilot ladder on a pilot hoist; and

(2) 150 kilograms (330 pounds) times the maximum persons capacity of the hoist;

(c) *Lift height* means the distance from the lowest step of the pilot ladder on a pilot hoist to the deck of a vessel on which the hoist is designed for installation when—

(1) The suspension cables of the hoist are run out until only three turns of cable remain on each drum; or

(2) If the hoist does not have suspension cables, the ladder or lift platform is in its lowest position.

#### § 163.002-7 Independent laboratory.

(a) The approval and production tests in this subpart must be conducted by, or under the supervision of, an independent laboratory accepted by the Coast Guard under subpart 159.010 of this chapter.

(b) [Reserved]

#### § 163.002-9 Approval procedure.

(a) *General*. A pilot hoist is approved by the Coast Guard under the procedures in subpart 159.005 of this chapter.

(b) *Approval testing*. Each approval test must be conducted in accordance with § 163.002-21.

(c) *Approval of alternative designs*. A pilot hoist that does not meet the materials, construction, or performance requirements of this subpart may be approved if the application and any approval tests prescribed by the Commandant in place of or in addition to the approval tests required by this subpart, show that the alternative materials, construction, or performance is at least as effective as that specified by the requirements of this subpart.

#### § 163.002-11 Materials.

(a) *Gears*. Each gear in a pilot hoist must be made of machine cut steel or machine cut bronze, or must be of a design of equivalent strength, durability, reliability and accuracy.

(b) *Suspension cables*. Each suspension cable on a pilot hoist must be a corrosion-resistant wire rope other than galvanized wire rope.

(c) *Corrosion-resistant materials*. Materials of a pilot hoist that are not in watertight enclosures must be—

(1) Corrosion-resistant or must be treated to be corrosion-resistant; and

(2) Galvanically compatible with each other adjoining material.

(d) *Aluminum alloys*. Any aluminum alloy which is not resistant to stress corrosion in marine atmospheres (i.e., contains more than 0.6 percent copper), must not be used in a structural component or in any other hoist component subject to stress.

#### § 163.002-13 Construction.

(a) *General*. Each hoist must have a rigid ladder or a lift platform on which a person being raised or lowered may stand.

(b) *Spreader*. Each hoist must have a spreader or other device to prevent twisting of its ladder or lift platform. If a spreader is provided, it must be at least 1800 millimeters (5 feet, 10 inches) long.

(c) *Rollers*. The rigid ladder or lift platform on a pilot hoist and the ends of its spreader (if a spreader is provided) must have rollers at each point of contact with the vessel that allow the ladder or platform to move smoothly over the side of the vessel.

(d) *Load carrying parts*. Each load carrying part of a pilot hoist must be designed to have a minimum breaking strength of at least six times the load imposed on the part by the working load during operation of the hoist.

(e) *Exposed moving parts*. Each exposed moving part of a pilot hoist that poses a hazard to personnel must have a screen or guard.

(f) *Nonfunctional sharp edges and projections of excessive length*. A pilot hoist must not have nonfunctional sharp edges and must not have fastening devices or other projections of excessive length.

(g) *Installation requirements*. Each pilot hoist must be designed to allow—

(1) Its installation along the edge of a deck at a vertical portion of the hull;

(2) Its installation on the deck in a manner that does not require use of the vessel's side rails for support; and

(3) Unobstructed passage between the ladder or lift platform of the hoist and the deck of a vessel.

(h) *Deck interlock for portable hoist*. A pilot hoist, if portable, must have a deck interlock that prevents movement of the ladder or lift platform when the hoist is not installed.